U.S. Regulatory Considerations for *Renibacterium salmoninarum for intra & international commerce*

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Review of the facts:

- Evidence of *Rs*, causative agent of BKD, is found in most, if not all, salmonid populations in the U.S.
- Host and environmental factors are critical when determining if *Rs* will result in BKD.
- Many States (and possibly Tribes?) have regulatory programs for *Rs.*
- No Federal regulations on control of *Rs.*

Impacts of regulations

- May restrict or prevent interstate commerce of live eggs, gametes or fish.
- Economic consequences – private growers.
- Management consequences – may limit opportunities for fishery managers.
- Legal exposure for U.S. govt.

Often used criteria for a “regulated disease”

- ✓ Causes significant loss in cultured or wild stocks.
- ✓ Infectious disease with validated diagnostic test.
- ✓ Infection can be spread by commerce of live aquatic animals or products.
- ✓ Several geo-political “zones” have freedom.
- ✓ Ability to successfully treat disease limited.

Examples of regulated diseases: IHN, ISA, VHS, BKD.

Examples of “non”: Redmouth, vibriosis, KHV.

Regulations on commerce of *Rs* fish

State	Imports allowed?	If *Rs* + ?	BKD mgt. plans ?	*Rs* in wild populations
AK	No		Yes	Yes
CA	Yes	No	Yes	Yes
ID	Yes	Yes/No	Yes	Yes
MT	Yes	No	Yes	Yes
WA	Yes	Yes	Yes	Yes

1991 FWS BKD workshop

- Assist FWS in formulating a rational strategy for managing BKD.
- Collect information on *Rs* distribution; impacts of BKD on mgt. strategies, policies, and regulations.
- Identify gaps in research in order to develop appropriate mgt. strategies.

Recommendations from workshop

- BKD should be considered in a different light than *Rs* in current (1991) FWS policies.
- No valid reason to destroy *Rs*-infected stocks as recommended by FWS policy.
- Approved diagnostic methods should include ELISA and FAT.
- *Rs* + stocks should be managed, not destroyed and stocked only in *Rs* + waters.
- No need to treat BKD differently East or West of Rockies as currently stated (1991) in FWS policy.

Research needs from 1991 workshop

- Improve knowledge of pathogenesis of disease. (40 votes)
- Improve diagnostic procedures (35 votes)
- Improve management and control strategies (30 votes)
- Prevalence and impact on feral populations (14 votes)
- Models for risk analysis (3 votes)

So where are we in 2005?

- In spite of regulatory climate being similar to 1991, we have yet to conduct a quantitative risk analysis to determine if commerce of *Rs*-positive products increase the prevalence of *Rs* in feral or cultured stocks.
- Epidemiological evidence is not clear of the impact of *Rs* on feral populations, particularly in BKD-resistant salmonids.

NAAHP & BKD – Where do we go?

- Define the risk of intra & interstate commerce of *Rs*- positive fish.
- Determine if management of *Rs* should occur at national or local level.
- Determine if it makes sense, from mgt. and regulatory standpoints, to have consistent regulations among States and Tribes.
- Ensure, regardless of how NAAHP implemented, U.S. regulations are science-based, provide some consistency with international policies, and provide safe and sustainable opportunities for private entrepreneurs.

Thank you for your attention!

Questions?